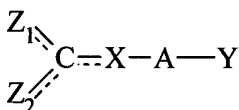


AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions of the claims and listing of the claims in the application:

1. **(Original)** A method of treating or preventing a body disorder related to weight gain or loss in a subject afflicted with said disorder, comprising administering to the subject an amount of a creatine compound, or a pharmaceutically acceptable salt thereof, effective to treat, reduce, or prevent said disorder.
2. **(Original)** The method of claim 1 wherein said disorder is obesity.
3. **(Canceled)**
4. **(Currently Amended)** The method of claim 1 wherein said disorder is obesity associated disorder such as cardiovascular disease, hypertension, hyperlipidaemia, osteoporosis ~~osteoporosis~~, and osteoarthritis.
5. **(Original)** The method of claim 1 wherein the subject is human.
6. **(Currently Amended)** A method for treating a metabolic disorder consisting of obesity and ~~it's~~ its associated diseases, in a subject experiencing said disorder, comprising administering to the subject a therapeutic amount of a creatine analogue having the general formula:



and pharmaceutically acceptable salts thereof, wherein:

- a) Y is selected from the group consisting of: -CO₂H-NHOH, -NO₂, -SO₃H, -C(=O)NHSO₂J and -P(=O)(OH)(OJ), wherein J is selected from a group consisting of: hydrogen, C₁-C₆ straight chain alkyl, C₃-C₆ branched alkyl, C₂-C₆ alkenyl, C₃-C₆ branched alkenyl, and aryl;

b) A is selected from the group consisting of: C, CH, C₁-C₅ alkyl, C₂-C₅ alkenyl, C₂-C₅ alkynyl, and C₁-C₅ alkoyl chain, each having 0-2 substituents which are selected independently from the group consisting of:

1) K, where K is selected from the group consisting of: C₁-C₆ straight alkyl, C₂-C₆ straight alkenyl, C₁-C₆ straight alkoyl, C₃-C₆ branched alkyl, C₃-C₆ branched alkenyl, and C₄-C₆ branched alkoyl, K having 0-2 substituents independently selected from the group consisting of bromo, chloro, epoxy and acetoxy;

2) an aryl group selected from the group consisting of: a 1-2 ring carbocycle and a 1-2 ring heterocycle, wherein the aryl group contains 0-2 substituents independently selected from the group consisting of: -CH₂L and -COCH₂L where L is independently selected from the group consisting of: bromo, chloro, epoxy and acetoxy; and

3) -NH-M, wherein M is selected from the group consisting of: hydrogen, C₁-C₄ alkyl, C₂-C₄ alkenyl, C₁-C₄ alkoyl, C₃-C₄ branched alkyl, C₃-C₄ branched alkenyl, and C₄ branched alkoyl;

c) X is selected from the group consisting of NR₁, CHR₁, CR₁, O and S, wherein R₁ is selected from the group consisting of:

1) hydrogen;

2) K where K is selected from the group consisting of: C₁-C₆ straight alkyl, C₂-C₆ straight alkenyl, C₁-C₆ straight alkoyl, C₃-C₆ branched alkyl, C₃-C₆ branched alkenyl, and C₄-C₆ branched alkoyl, K having 0-2 substituents independently selected from the group consisting of: bromo, chloro, epoxy and acetoxy;

3) an aryl group selected from the group consisting of a 1-2 ring carbocycle and a 1-2 ring heterocycle, wherein the aryl group contains 0-2 substituents independently selected from the group consisting of: -CH₂L and -COCH₂L where L is independently selected from the group consisting of: bromo, chloro, epoxy and acetoxy;

4) a C₅-C₉ α-amino-ω-methyl-ω-adenosylcarboxylic acid attached via the ω-methyl carbon;

5) 2 C₅-C₉α-amino-w-aza-w-methyl-w-adenosylcarboxylic acid attached via the w-methyl carbon;

6) a C₅-C₉ α-amino-w-thia-w-methyl-w-adenosylcarboxylic acid attached via the w-methyl carbon;

d) Z₁ and Z₂ are chosen independently from the group consisting of: =O, -NHR₂, -CH₂R₂, -NR₂OH; wherein Z₁ and Z₂ may not both be =O and wherein R₂ is selected from the group consisting of:

1) hydrogen;

2) K, where K is selected from the group consisting of: C₁-C₆ straight alkyl; C₂-C₆ straight alkenyl, C₁-C₆ straight alkoyl, C₃-C₆ branched alkyl, C₃-C₆ branched alkenyl, and C₄-C₆ branched alkoyl, K having 0-2 substituents independently selected from the group consisting of: bromo, chloro, epoxy and acetoxy;

3) an aryl group selected from the group consisting of a 1-2 ring carbocycle and a 1-2 ring heterocycle, wherein the aryl group contains 0-2 substituents independently selected from the group consisting of: -CH₂L and -COCH₂L where L is independently selected from the group consisting of: bromo, chloro, epoxy and acetoxy;

4) 2 C₄-C₈ [[a]] α-amino-carboxylic acid attached via the w-carbon;

5) B, wherein B is selected from the group consisting of: -CO₂H-NHOH, -SO₃H, -NO₂, OP(=O)(OH)(OJ) and -P(=O)(OH)(OJ), wherein J is selected from the group consisting of: hydrogen, C₁-C₆ straight alkyl, C₃-C₆ branched alkyl, C₂-C₆ alkenyl, C₃-C₆ branched alkenyl, and aryl, wherein B is optionally connected to the nitrogen via linker selected from the group consisting of: C₁-C₂ alkyl, C₂ alkenyl, and C₁-C₂ alkoyl;

6) -D-E, wherein D is selected from the group consisting of: C₁-C₃ straight alkyl, C₃ branched alkyl, C₂-C₃ straight alkenyl, C₃ branched alkenyl, C₁-C₃ straight alkoyl, aryl and aroyl; and E is selected from the group consisting of: -(PO₃)_nNMP, where n is 0-2 and NMP is ribonucleotide monophosphate connected via the 5'-phosphate, 3'-phosphate or the aromatic ring of the base; -[P(=O)(OCH₃)(O)]_m-Q, where m is 0-3 and Q is a ribonucleoside connected via the ribose or the aromatic ring of the base; -[P(=O)(OH)(CH₂)]_m-Q, where m is 0-3 and Q is a

ribonucleoside connected via the ribose or the aromatic ring of the base and an aryl group containing 0-3 substituents chosen independently from the group consisting of: Cl, Br, epoxy, acetoxy, -OG, -C(=O)G, and -CO₂G, where G is independently selected from the group consisting of: C₁-C₆ straight alkyl, C₂-C₆ straight alkenyl, C₁-C₆ straight alkoyl, C₃-C₆ branched alkyl, C₃-C₆ branched alkenyl, C₄-C₆ branched alkoyl, wherein E may be attached to any point to D, and if D is alkyl or alkenyl, D may be connected at either or both ends by an amide linkage; and

7) -E, wherein E is selected from the group consisting of -(PO₃)_nNMP, where n is 0-2 and NMP is a ribonucleotide monophosphate connected via the 5'-phosphate, 3'-phosphate or the aromatic ring of the base; -[P(=O)(OCH₃)(O)]_m-Q where m is 0-3 and Q is a ribonucleoside connected via the ribose or the aromatic ring of the base; -[P(=O)(OH)(CH₂)]_m-Q where m is 0-3 and Q is a ribonucleoside connected via the ribose or the aromatic ring of the base; and an aryl group containing 0-3 substituents chose independently from the group consisting of: Cl, Br, epoxy, acetoxy, -OG, -C(=O)G, and -CO₂G, where G is independently selected from the group consisting of: C₁-C₆ straight alkyl, C₂-C₆ straight alkenyl, C₁-C₆ straight alkoyl, C₃-C₆ branched alkyl, C₃-C₆ branched alkenyl, C₄-C₆ branched alkoyl; and if E is aryl, E may be connected by an amide linkage;

e) if R₁ and at least one R₂ group are present, R₁ may be connected by a single or double bond to an R₂ group to form a cycle of 5 to 7 members;

f) if two R₂ groups are present, they may be connected by a single or a double bond to form a cycle of 4 to 7 members; and

g) if R₁ is present and Z₁ or Z₂ is selected from the group consisting of -NHR₂, -CH₂R₂ and -NR₂OH, then R₁ may be connected by a single or double bond to the carbon or nitrogen of either Z₁ or Z₂ to form a cycle of 4 to 7 members.

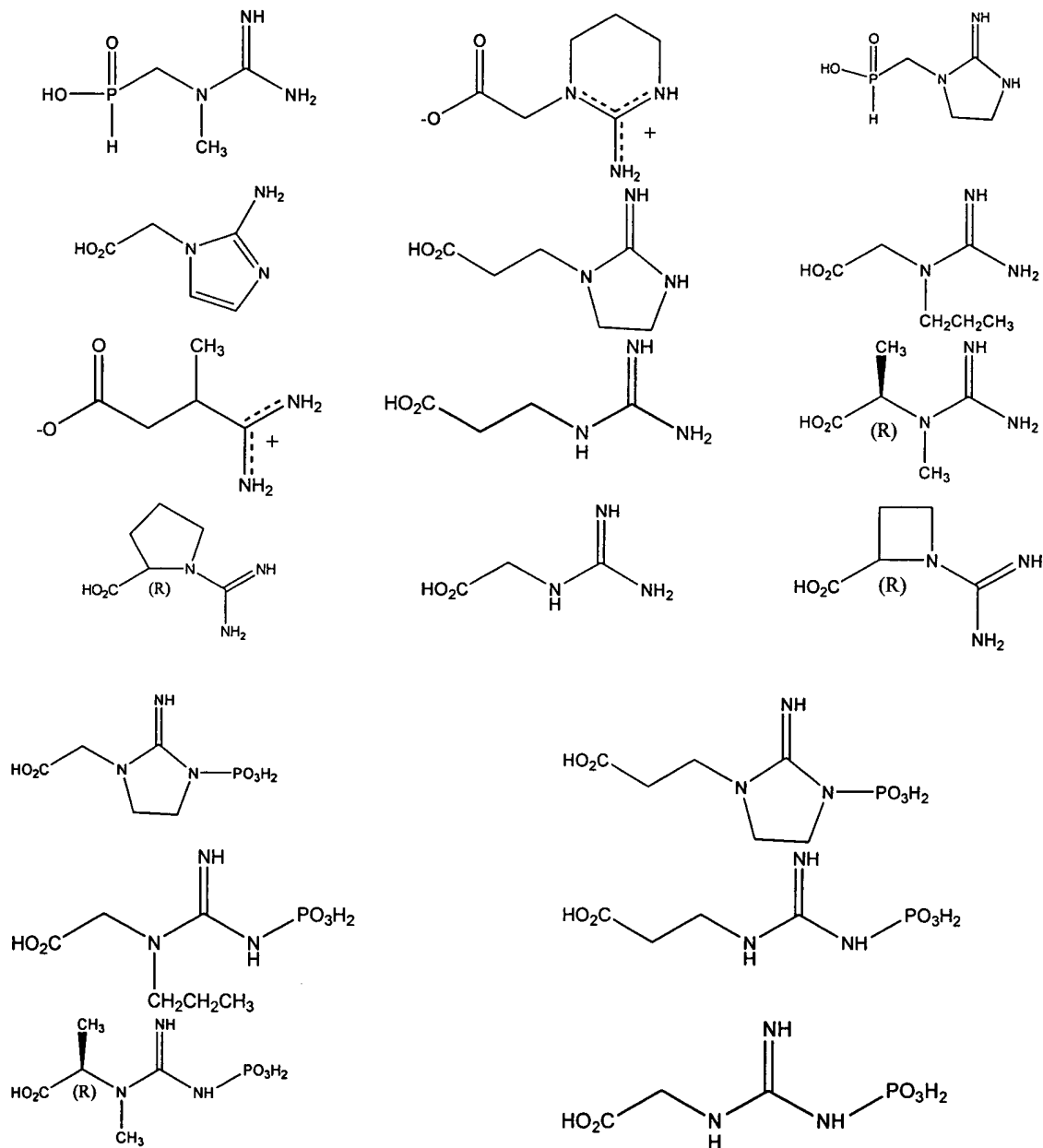
~~Currently preferred compounds include cyclocreatine, creatine phosphate and those included in Tables 1 and 2 hereinabove.~~

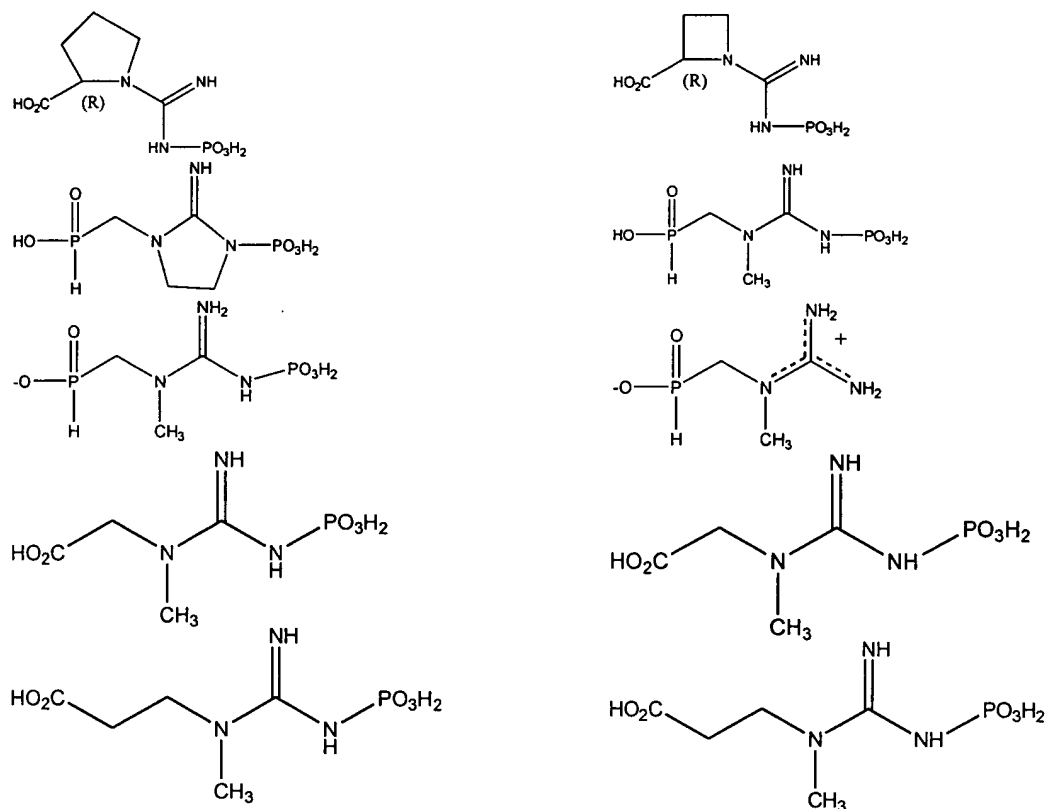
7. (Original) A method of claim 6 wherein the creatine compound is used in combination with standard therapies used to treat body weight disorders.

Claims 8-13. (Canceled)

14. (New) The method of claim 2 wherein said compound is creatine.

15. (New) A method of treating or preventing obesity, comprising: administering to a subject afflicted with or susceptible to obesity, an amount of a creatine compound, or a pharmaceutically acceptable salt thereof effective to treat, reduce or prevent obesity, wherein said creatine compound is selected from the group consisting of:

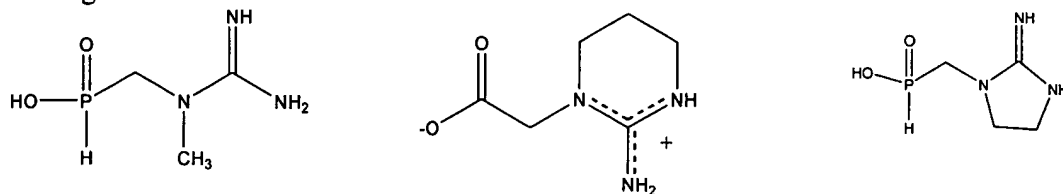


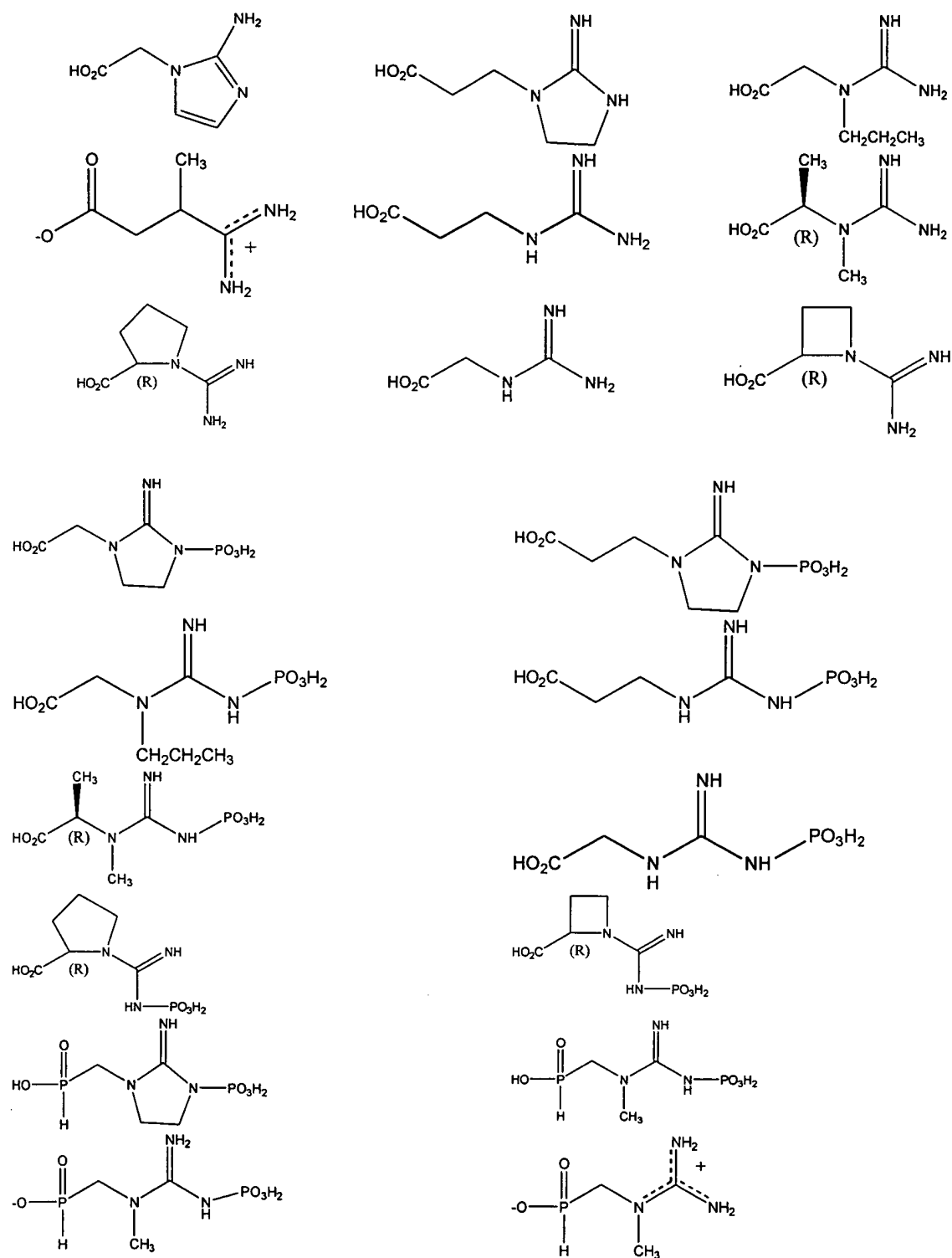


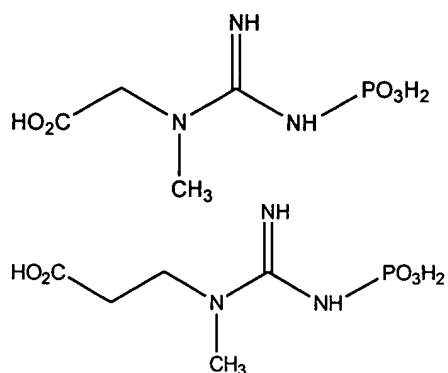
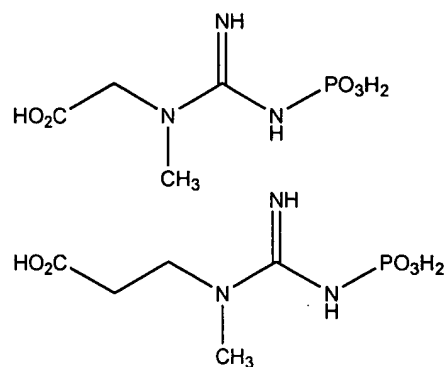
and pharmaceutically acceptable salts thereof.

16. (New) A method of treating or preventing obesity, comprising: administering to a subject afflicted with or susceptible to obesity, an amount of a cyclocreatine, or a pharmaceutically acceptable salt thereof effective to treat, reduce or prevent obesity.

17. (New) A method of treating or preventing cardiovascular disease, comprising: administering to a subject afflicted with or susceptible to cardiovascular disease, an amount of a creatine compound, or a pharmaceutically acceptable salt thereof effective to treat, reduce or prevent cardiovascular disease, wherein said creatine compound is selected from the group consisting of:

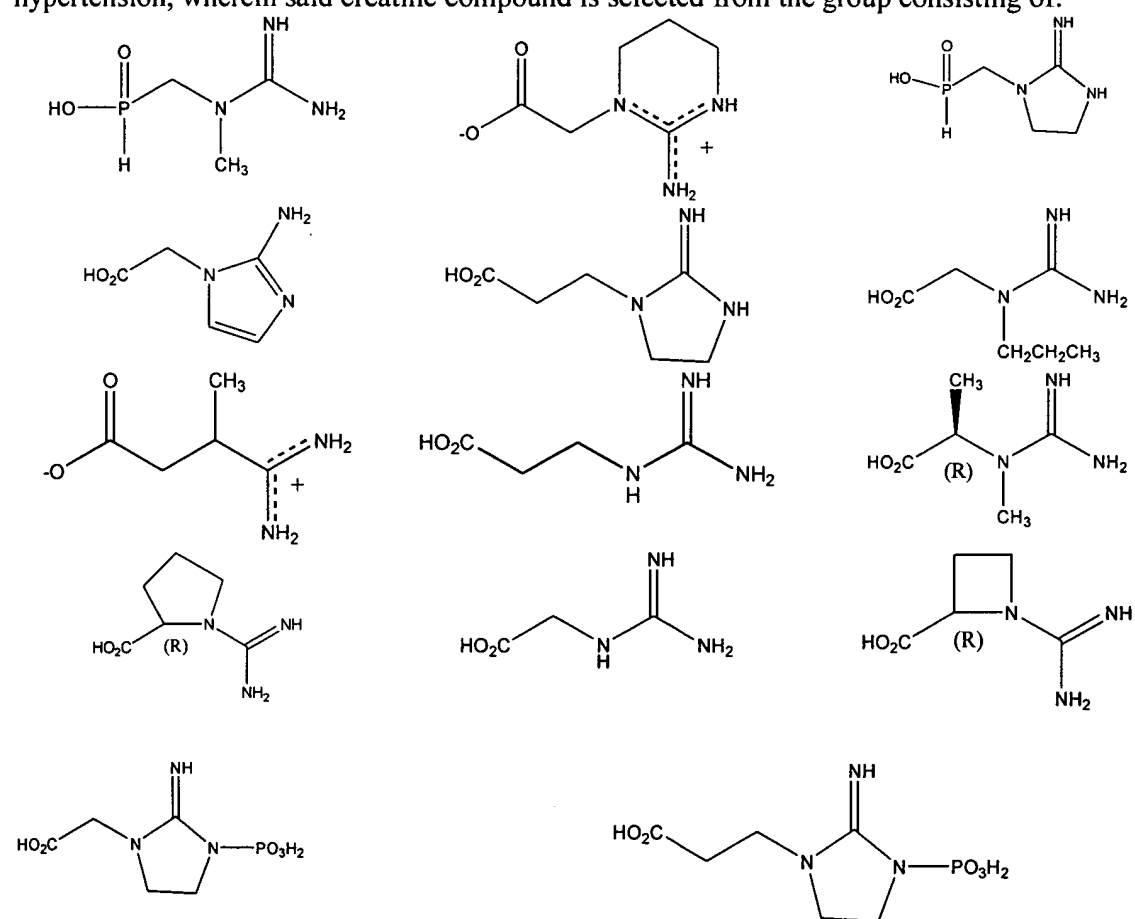


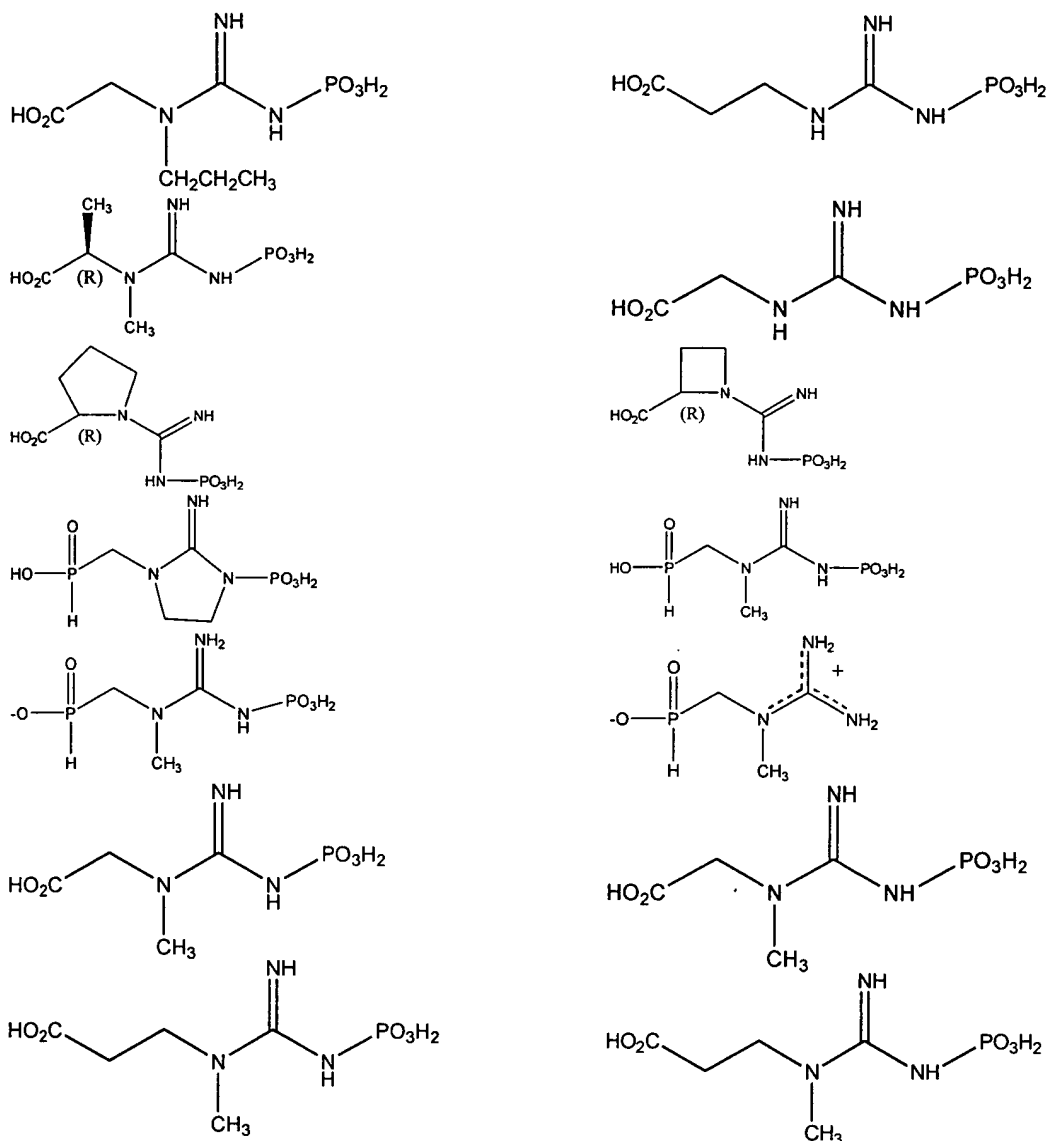




and pharmaceutically acceptable salts thereof.

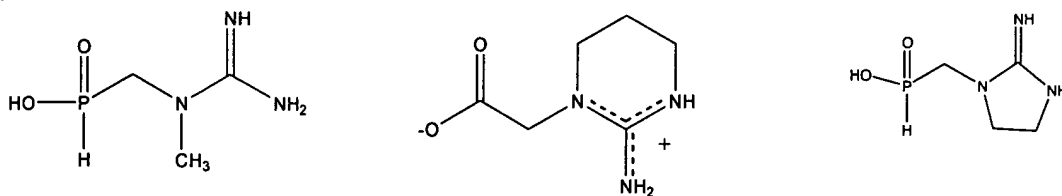
18. (New) A method of treating or preventing hypertension, comprising:
administering to a subject afflicted with or susceptible to hypertension, an amount of a creatine
compound, or a pharmaceutically acceptable salt thereof effective to treat, reduce or prevent
hypertension, wherein said creatine compound is selected from the group consisting of:

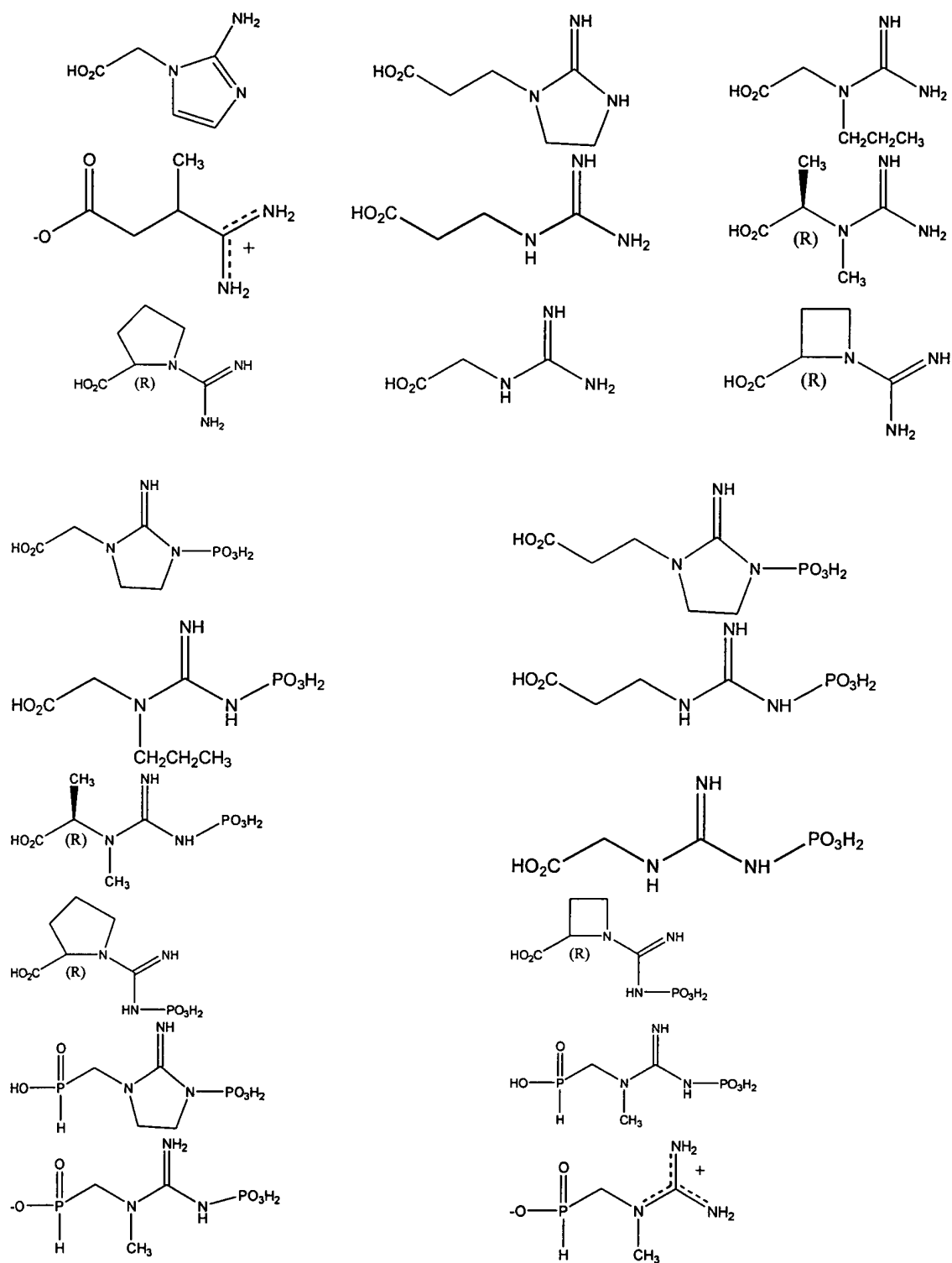


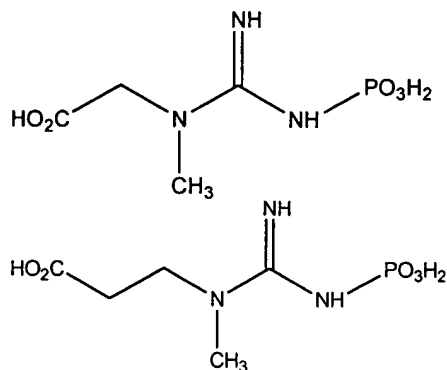
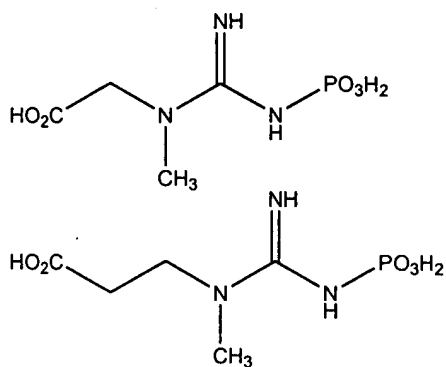


and pharmaceutically acceptable salts thereof.

19. (New) A method of treating or preventing hyperlipidemia, comprising:
administering to a subject afflicted with or susceptible to hyperlipidemia, an amount of a
creatine compound, or a pharmaceutically acceptable salt thereof effective to treat, reduce or
prevent hyperlipidemia, wherein said creatine compound is selected from the group consisting
of:

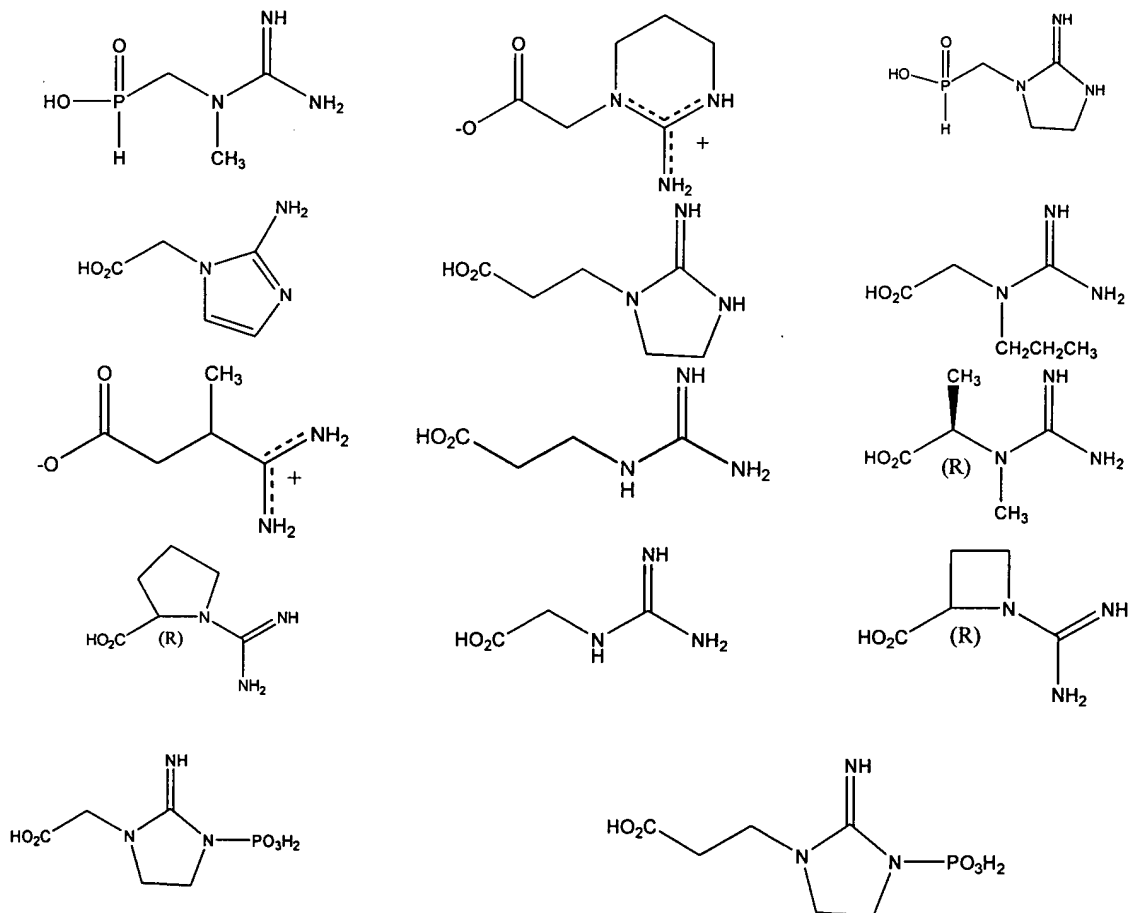


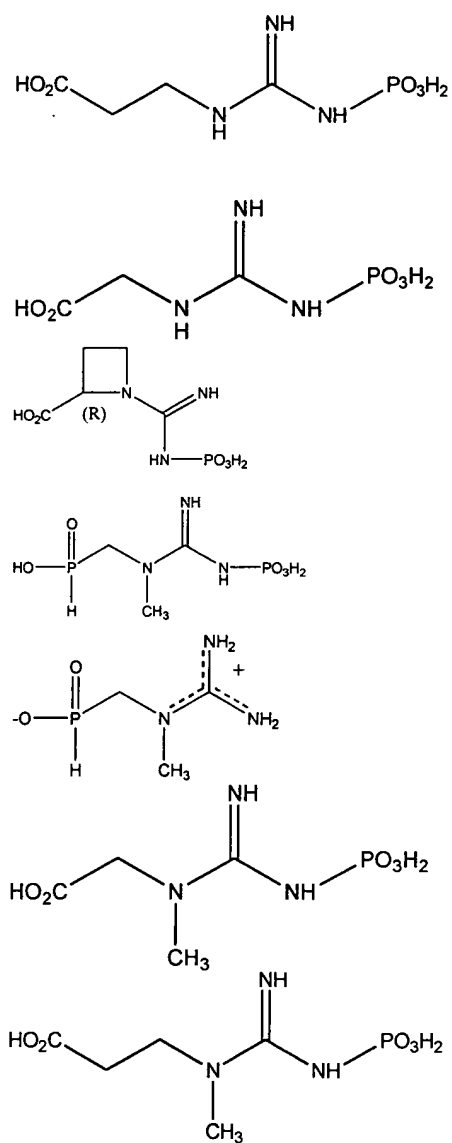
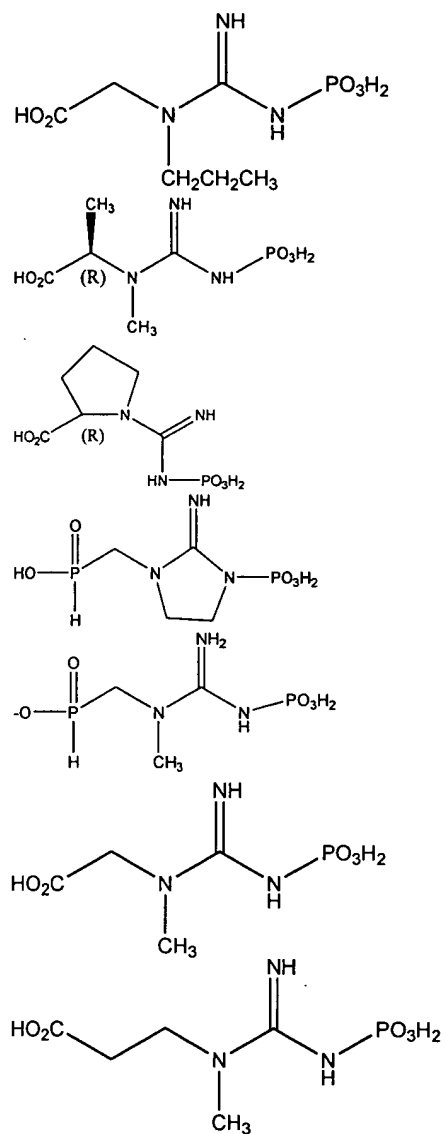




and pharmaceutically acceptable salts thereof.

20. (New) A method of treating or preventing osteoporosis, comprising:
administering to a subject afflicted with or susceptible to hyperlipidemia, an amount of a
creatine compound, or a pharmaceutically acceptable salt thereof effective to treat, reduce or
prevent hyperlipidemia, wherein said creatine compound is selected from the group consisting
of:





and pharmaceutically acceptable salts thereof.